AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A process of fabricating a microstructure having a vacuum cavity, comprising the following steps:

a) producing, in the thickness of a first silicon wafer, a porous silicon region intended to format least a part of one wall of the cavity and capable of absorbing residual gases in the cavity;

b) joining the first silicon wafer to a second wafer, so as to produce the cavity; and

c) annealing between 400°C and 1000°C, the microstructure obtained after step b) so as to strengthen the bond.

2. (Previously Presented) The process as claimed in claim 1, wherein step a) furthermore includes a step of impregnating the porous silicon region with another material that can also absorb residual gases in the cavity.

3. (Previously Presented) The process as claimed in claim 1, wherein when the cavity has a predetermined height, the joining operation of step b) is carried out by means of an intermediate wafer whose thickness contributes to the height of the cavity.

4. (Previously Presented) The process as claimed in claim 1, wherein prior to step b), the process includes a step of carrying out a physico-chemical preparation of the surfaces of the wafers used in step b).

5. (Previously Presented) The process as claimed in claim 1, wherein prior to step b), the process includes a step of outgasing the wafers used in step b).

6. (Previously Presented) The process as claimed in claim 1, wherein the joining operation of step b) is carried out under vacuum.

7. (Previously Presented) The process as claimed in claim 6, wherein the joining operation is carried out by bonding at ambient temperature.

8. (Canceled)

9. (Previously Presented) The process as claimed in claim 2, wherein the other material that can also absorb the residual gases in the cavity consists of titanium.

10. (Previously Presented) The process as claimed in claim 1, wherein the second wafer and/or the intermediate wafer are made of silicon or glass.

11. (Previously Presented) The process as claimed in claim 1, wherein the process is applied collectively to several microstructures.

12. (Withdrawn) A microstructure, fabricated by a process as claimed in claim 1, having a vacuum cavity, comprising:

at least two wafers that contribute to bounding the cavity, the first wafer of said two wafers, is made of silicon and includes a porous silicon region capable of absorbing residual gases in the cavity, the region being produced in the thickness of said silicon wafer.

13. (Withdrawn) The microstructure as claimed in claim 12, wherein the porous silicon region is impregnated with another material that can also absorb residual gases in the cavity.

14. (Withdrawn) The microstructure as claimed in claim 13, wherein the other material that can also absorb residual gases in the cavity is titanium.

15. (Withdrawn) The microstructure as claimed in claim 12, wherein the wafers other than the first wafer are made of silicon or glass, or a combination of silicon and glass.

16. (Withdrawn) The microstructure as claimed in claim 12, wherein said microstructure includes a resonator housed in the cavity.

17. (Withdrawn) A sensor having a microstructure as claimed in claim 12.

18. (Withdrawn) The sensor as claimed in claim 17, wherein the sensor is a resonant pressure sensor or a resonator accelerometer or a vibrating gyroscope or an electromechanical filter.

19. (Previously Presented) The process as claimed in claim 6, wherein the joining is carried out by brazing.

20. (Previously Presented) The process of claim 1, wherein during said annealing step, the porous silicon region is activated allowing a surface of the porous silicon layer to be cleaned by desorption of H molecules present after production of the porous silicon region.

21. (Previously Presented) The process of claim 7, wherein during said annealing step, the porous silicon region is activated allowing a surface of the porous silicon layer to be cleaned by desorption of H molecules present after production of the porous silicon region.